

AMENDMENT NO. 2 JUNE 2021

TO

IS 16098 (PART 1) : 2013 STRUCTURED-WALL PLASTICS PIPING SYSTEMS FOR NON-PRESSURE DRAINAGE AND SEWERAGE — SPECIFICATION

PART 1 PIPES AND FITTINGS WITH SMOOTH EXTERNAL SURFACE, TYPE A

(Page 1, clause 2) — Substitute the following for the existing clause:

‘The following standards contain provisions which, through reference in this text, constitute provision of this standard. At the time of publication the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate, the possibility of applying the most recent editions of the standards.

<i>IS No.</i>	<i>Title</i>
4905 : 2015/ ISO 24153 : 2009	Random sampling and randomization procedures (<i>first revision</i>)
4985 : 2021	Unplasticized PVC pipes for water supplies — Specification (<i>fourth revision</i>)
IS 5382 : 2018/ ISO 4633 : 2015	Rubber seals — Joint rings for water supply, drainage and sewerage pipelines — Specification for materials (<i>second revision</i>)
12235	Thermoplastics pipes and fittings — Methods of test (<i>first revision</i>)
(Part 1) : 2004	Measurement of dimensions
(Part 2) : 2004	Determination of Vicat softening temperature
(Part 4) : 2004	Determining the detrimental effect on the composition of water

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<i>IS No.</i>	<i>Title</i>
(Part 5/Sec 1) : 2004	Longitudinal reversion, Section 1 Determination methods
(Part 5/Sec 2) : 2004	Longitudinal reversion, Section 2 Determination parameters
(Part 6) : 2004	Stress relief test
(Part 8/Sec 2) : 2004	Resistance to internal hydraulic pressure, Section 2 Leak-tightness of elastomeric sealing ring type socket joints under positive internal pressure and with angular deflection
(Part 8/Sec 3) : 2004	Resistance to internal hydraulic pressure, Section 3 Leak-tightness of elastomeric sealing ring type socket joints under negative internal pressure and with angular deflection
(Part 9) : 2004	Resistance to external blows (impact resistance) at 0 °C (round-the-clock method)
(Part 10) : 2004	Determination of organotin as tin aqueous solution
(Part 11) : 2004	Resistance to dichloromethane at specified temperature
14182 : 1994	Solvent cement for use with unplasticized polyvinyl chloride plastic pipe and fittings — Specification
15778 : 2007	Chlorinated polyvinyl chloride (CPVC) pipes for potable hot and cold water distribution supplies — Specification
16098 (Part 2) : 2013	Structured-wall plastics piping systems for non-pressure drainage and sewerage — Specification: Part 2 Pipes and fittings with non-smooth external surface, Type B'

(Page 7, clause 7, Title) — Substitute ‘**PHYSICAL AND CHEMICAL CHARACTERISTICS OF PIPES**’ for ‘**PHYSICAL CHARACTERISTICS FOR PIPES**’.

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(Page 9, clause 7.5) — Substitute ‘IS 12235 (Part 5/Sec 1) and IS 12235 (Part 5/Sec 2)’ for ‘IS 12235 (Part 5)’.

(Page 9, clause 7.5) — Insert the following clause at the end:

‘7.6 Effect on Water

The pipes shall not have any detrimental effect on the composition of water flowing through them. When tested by the method described in IS 12235 (Part 4) and IS 12235 (Part 10), the quantities of lead, dialkyl tin C4 and higher homologues (measured as tin), and any other toxic substances extracted from the internal walls of the pipes shall not exceed the concentrations as specified in **10.3** of IS 4985 and meet the other requirements given in **10.3.1** of IS 4985.

NOTE — Implementation of the phase out programme for use of lead stabilizers in PVC pipe and fitting manufacturing of the Government of India shall be borne in mind.’

(Page 9, clause 8, Title) — Substitute ‘**PHYSICAL AND CHEMICAL CHARACTERISTICS OF FITTINGS**’ for ‘**PHYSICAL CHARACTERISTICS OF FITTINGS**’.

(Page 9, clause 8.3) — Insert the following clause at the end:

‘8.4 Effect on Water

The fittings shall not have any detrimental effect on the composition of water flowing through them. When tested by the method described in IS 12235 (Part 4) and IS 12235 (Part 10), the quantities of lead, dialkyl tin C4 and higher homologues (measured as tin), and any other toxic substances extracted from the internal walls of the fittings shall not exceed the concentrations as specified in **10.3** of IS 4985 and meet the other requirements given in **10.3.1** of IS 4985.

NOTE — Implementation of the phase out programme for use of lead stabilizers in PVC pipe and fitting manufacturing of the Government of India shall be borne in mind.’

(Page 13, Table 12) — Insert the following row at the end:

Sl No.	Test	Sample Size	Requirement, Ref to Clause
(1)	(2)	(3)	(4)
vi)	Effect on water	3	7.6

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(Page 14, clause 14.1.6.4) — Insert the following clause at the end:

‘14.1.7 Effect on Water Test

14.1.7.1 For this test, the manufacturer or the supplier shall furnish to the testing authority three samples of the smallest size of pipe taken from each machine (selected preferably from a regular production lot).

14.1.7.2 Three samples so selected shall be tested for compliance with the requirements for effect on water as given in 7.6.

14.1.7.3 If all three samples pass the requirements for effect on water, the type test of the pipe under consideration shall be considered to be eligible for approval, which shall be normally valid for a period of one year.

14.1.7.4 In case any of the samples fails in this test, the testing authority, at its discretion, may call for fresh samples not exceeding the original number, and subject them to the test for effect on water. If, in the repeat test, no single failure occurs, the type of pipe under consideration shall be considered eligible for type approval. If any of the samples fails in the repeat test, the type of pipe shall not be approved. The manufacturer or the supplier may be asked to improve the design and resubmit the product for type approval.

14.1.7.5 At the end of the validity period (normally one year) or earlier, if necessary, the testing authority may call for fresh samples for effect on water test for the purpose of type approval.’

(Page 14, Table 13) — Insert the following row at the end:

Sl No.	Test	Sample Size	Requirement, Ref to Clause
(1)	(2)	(3)	(4)
iii)	Effect on water	3	8.4

(Page 14, clause 14.2.3) — Insert the following clause at the end:

‘14.2.4 Effect on Water Test

14.2.4.1 For this test, the manufacturer or the supplier shall furnish to the testing

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authority three samples of the smallest size of fitting taken from each machine (selected preferably from a regular production lot).

14.2.4.2 Three samples so selected shall be tested for compliance with the requirements for effect on water as given in **8.4**.

14.2.4.3 If all three samples pass the requirements for effect on water, the type test of the fitting under consideration shall be considered to be eligible for approval, which shall be normally valid for a period of one year.

14.2.4.4 In case any of the samples fails in this test, the testing authority, at its discretion, may call for fresh samples not exceeding the original number, and subject them to the test for effect on water. If, in the repeat test, no single failure occurs, the type of fitting under consideration shall be considered eligible for type approval. If any of the samples fails in the repeat test, the type of fitting shall not be approved. The manufacturer or the supplier may be asked to improve the design and resubmit the product for type approval.

14.2.4.5 At the end of the validity period (normally one year) or earlier, if necessary, the testing authority may call for fresh samples for effect on water test for the purpose of type approval.'

(Page 14, clause **15.1.2**) — Insert the following clause at the end:

'15.1.2.1 The lot number/batch number shall include the details of production in the following manner:

Year	Month	Day	Machine No.	Shift
xxxx	xx	xx	xxx	x

(Page 15, clause **15.2.2**) — Insert the following clause at the end:

'15.2.2.1 The information regarding batch or lot number, shall be printed on the box or packet containing the fittings. The lot number/batch number shall include the details of production in accordance with **15.1.2.1**.'

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(Page 15, *clause 15.3*) — Substitute the following for the existing:

‘15.3 BIS Certification Marking

The pipes and fittings conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the pipes and fittings may be marked with the Standard Mark.’